



VGI Workgroup Launch Meeting

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CPUC Auditorium
San Francisco, California

April 24, 2017



Agenda

Topic	Start time	End time
Introductory remarks	9:00 AM	9:10
Sponsoring Agency remarks	9:10	9:25
Review of Staff Straw Proposal and discussion of meeting format, process for participation	9:25	9:45
Guidelines for participation (ground rules) in today's discussion	9:45	10:00
Break	10:00	10:10
Round of introductions	10:10	10:40
Feedback from stakeholders on Staff Straw Proposal, participants, and schedule	10:40	11:10
Feedback from stakeholders on Use Cases of interest	11:10	11:40
Review of discussion and action items	11:40	11:50
Review of Meeting Schedule and methods for providing comments/feedback	11:50	12:00



Introductory Remarks



Sponsoring Agency Remarks



Review of Staff Straw Proposal

Process that was used for creating the SP

- - Questions to be answered
- - Membership group
- - Frequency and format of meetings



Meeting Format

- Meetings will be held every second Monday, via Webex
- Duration will be 2 hours
- A listserv has been established for participation:
 - <http://www.energy.ca.gov/listservers/>



Listserve

www.energy.ca.gov/listservers/

- techmeritreview - Fuels and Transportation Technology Merit Review
- vgi_communications - VGI Communications

COMPLAINT AND INVESTIGATION

- cai02 - 11-CAI-02 - Complaint against Ormat Nevada, Inc. by California Unions for Reliable Energy
- cai03 - 11-CAI-03 - Complaint Against DyoCore, Inc.

SB 350 & AB 802 IMPLEMENTATION

- implementationsb350 - Developing Regulations, Guidelines, and Policies for Implementing SB 350 and AB 802
- barriers - SB 350 Barriers Report
- energydata - Increase Access to Energy Data
- integratedrp - Integrated Resource Plans
- regionalgrid - Regional Grid Operation and Governance

Submit



Website - <http://www.cpuc.ca.gov/vgi/>

A screenshot of a web browser displaying the California Public Utilities Commission (CPUC) website. The browser's address bar shows the URL "www.cpuc.ca.gov/vgi/". The website header includes the CPUC logo, the text "California Public Utilities Commission", and a search bar. A navigation menu contains links for "About Us", "Safety", "Transparency", "Utilities & Industries", "Licensing", "Proceedings", "Complaints", and "ORA". The main content area features a breadcrumb trail: "Home | Energy | Infrastructure | Vehicle-Grid Integration Communications Protocol Working Group". The title of the page is "Vehicle-Grid Integration Communications Protocol Working Group". The text on the page describes the CPUC's role in developing policies for vehicle-grid integration (VGI) and announces a working group meeting on April 24, 2017, at 9am-noon in the CPUC auditorium at 505 Van Ness Ave., San Francisco CA 94102. It also provides information on remote participation via a webex link and a meeting number (747 850 509) with a password (Energy1), and a phone-in number (866-811-6884) with a participant code (8742156). The page concludes by stating that the working group will allow participants to review, understand, and discuss the technical details of existing communication protocols.



Guidelines For Participation

- Self nominate organization spokespersons
- No repetition of previous points
- Stay within the topic area being discussed
- Focus on use cases, not the benefits of a particular communications protocol
- Focus on information sharing, not opinions where possible.
- Line up at the microphones, announce yourself/organizations
- Three minute speaking limit in order to enable everyone to have a turn to speak



Break



Introductions – Please state

- Name
- Organization
- Interest in participating in WG
- How communications impact your organization or business model
- Keep to 1 min per person if possible to save time for discussion



Feedback on Straw Proposal

- Proposal
- Participants
- Questions to be addressed
- Criteria to be used in evaluating questions



Feedback on business/use cases



Review of discussion and action items



Methods for staying involved

- Listserve
- Website
- email



Meeting Schedule

<u>Date</u>	<u>Topic</u>
4/24/2017	Kickoff Meeting/Review existing and identify any additional potential VGI use cases. How can customers, third parties, and utilities extract value from these use cases?
5/8/2017	Review the current technical and economic barriers to implementing VGI use cases. Identify any market barriers that may be addressed by state action.
5/22/2017	Review research that has been conducted in California and globally by utilities, automakers, charging companies, and others related to VGI. What lessons learned from the research are relevant to working group activities?
6/5/2017	What frameworks, outcomes, or criteria have prior studies employed to analyze the functionalities, costs, efficiency, interoperability, (or other factors) of VGI communications protocols
6/19/2017	What are the existing or proposed network architectures for VGI? How are existing network architectures designed to host communication protocols in the devices needed for VGI? What are the pros/cons of each architecture? Can these architectures support multiple communication protocols?
7/3/2017	How do automakers, charging providers, and IOUs measure the value of the proposed protocols and whether implementation will be cost-effective? How could market participants measure cost-effectiveness?



Meeting Schedule

Date	Topic
7/17/2017	What technology, hardware, and/or software is currently available to test the proposed protocols? Where are technology gaps?
7/31/2017	Can selecting an open-source network architecture enable the market to test, implement, and continually improve multiple protocols while maintaining simplicity for drivers? What are the implications of architecture design for market participants manufacturing devices?
8/14/2017	How do proposed protocols fit within the larger context of communications between vehicles, EVSE, the grid, utilities, automakers, EVSPs, and other distributed energy resources?
8/28/2017	How have IOUs tested whether proposed protocols/architectures are effective in facilitating VGI and what improvements should be made to enable scale? What contractual terms and conditions should utilities include in procurement or other programs to ensure EVs can provide grid value?
9/11/2017	Review the existing applicable communication protocols. a. For a VGI resource regulated at the EVSE, how can different communication protocols enable a pathway to utility markets for the VGI product? b. For a VGI resource regulated at the EV, how can different communication protocols enable a pathway to utility markets for the VGI product? c. What are the pros and cons of each communication protocol?
9/25/2017	Review of topics and takeaways, last call for contribution/arguments/resources



Thank you

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